

Field Journal

South West

No 1.

Q R Boney  
Curator & Bank  
National Museum of  
Victoria  
Russell.  
Melb. 2000

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Matthew 059 74/399

Carlan 059 82/333

Field Journal

South West No 1.



# Christian & Perry

Stratification, height & density

A = Tree Layer

B = Shrub Layer

C = Ground Layer

Stratification

[Lr. = Litter]

[M = Mallee]

Height - In metres, feet or inches.

Note: Beginning with this note-book height will be given in metres.

1 ft = .30 m. (Ca.)	12 ft = 3.6 m.	1 metre = 3 ft. 3.3 inches
2 = .6 m.	15 = 4.5 m.	
3 = .91 m. (.9 m.)	20 = 6.0 "	6 ins = 15.2 cms = .15 m.
4 = 1.2 m	25 = 7.6 "	
5 = 1.5 m	30 = 9.1 "	9 ins = 22.8 cms = .22 m.
6 = 1.82 m	35 = 10.6 "	
7 = 2.13 m	40 = 12.1 "	
8 = 2.43 m.	50 = 15.2	
9 = 2.74 m	60 = 18.2	
10 = 3.04 m.	70 = 21.3	
	80 = 24.3	
	90 = 27.4	
	100 = 30.4	

Density: X = dense XX = very dense  
Y = mid. dense  
Z = sparse ZZ = very sparse

A  $\frac{12}{Y}$  B  $\frac{3.6}{X}$  C  $\frac{.22}{Y}$

Map the Region  
at back

Vegetation Type  
Survey

S.W. Region - Victoria

With Bill Middleton  
June 1974

June 2nd Sunday

1505 Depart Rakeby  
for Dumbarton

Fine clear.

Petrol Beaupre

7 galls 4 dollars

Arrive Dumbarton

20.30 - 20.45 - 6

Bill & Joan's for

dinner & night  
Planning to start tomorrow  
morning



<sup>now</sup>  
June 25 0730 up

Finches

0930 Lying off for  
Edenhope - Bull Murre

Went overa flocks  
up to 30 P. *caenalonotus*  
Red b. Parrot

Alouatta *arvensis*  
singing - Bull dogs  
here for past 3 years

*Myiophobus* *leucophrys* ?  
*Myzomela* *malincolophus* 1  
*Gymnophobus* *hypoleuca* several  
(clear white - backs)

Agelaius type : seen, has  
characteristic of *leucophrys*  
+ True structure may  
supply answer.

Falco burgula Dh phase 2

Corvus prob. *malincolophus* flock  
Falco cenchroides 12.

Film 1 Menalla →

3

Film 1 Exakta →

Florus notatus 2 Grasses

Nabinnuk 10-30

Oeyphaps Ophrys 2-3.

Kerkela rosicapilla Black

Centru novae-hollandiae

12.50 Int. - like

11.05 Telpangor : P<sup>r</sup>

Film 1 Photo 1 Shrub -

Woodment = Low Shrubby

Woodment?? Brown leaves

Banksia ornata &

marginita, Astroloma

Photo 2 ditto

A 7-5 12 3  
X 5 Y C Z

Film 1 (Exakta)

Photo 1: ditto.

Photo 2: ditto.



Tupungu Prop.  
 polk dense will  
~~evolution~~ for photo  
 in future

Doele giga 1, 3

E. 1. Muntz Photo 3 - Swamp  
 Woodland Red gun &  
 black box preparation  
 Photo 4 photo

Poseum Silver grey - dark

Ara superbiosa 1

Photo 5 & 6. Bulake woodland

A <sup>10</sup> y B <sup>5-1</sup> ZZ C <sup>7</sup> 1-13

Lobulys n-hall. 1. - ~~hollow~~  
 several

Horden n-hall. 1. 4/

Photo 7 & 8 E. Allen Red  
Gum Habitat



~~Casual~~  
Tadorna casuarina 1 pr

Kohare galena flock  
Reetawee tenuirostris 1  
1200 E Edenhope

Pelud alluv \$6.35

counter lunch \$1.30 mixed  
Small breakfast.

12:55 Depart Edenhope - now  
— S of Region —  
heading S.W.

Tested mudmudra: Ferry  
Woodland. ~~are~~ Shrub  
woodland with <sup>bracken</sup> ~~ferns~~  
for shrub layer

F1 minutia

Photos 9 & 10 Ferry Woodland  
Bracken

A<sup>10</sup> B<sup>2m</sup>  
y 22 B' xx

B' = bracken.

Photos 11. 12. Swamp  
Woodland & dense  
rush layer  
Red gum.

*Porphyrio melanotos*  
 up to 20-20

*Halosteur sphennus* ?  
 some light brown feathers  
*Kuhaka Unnaka* 2  
 13-35 *Poecetes*

*Egymnophis hypoleucus*  
 common

Turning left to Bantley  
 Rocks Desert

Photos 13-14 - way to

Bantley Rocks

X *Xanthochloa flutellus*  
 near Woodland

Br Shrubland

$A^{10} B^{1.6} = B^{XX} C^{2.2} B^1 = \text{Xanthochloa}$

X about healthy  
 woodland?

Photos 15 & 16

Shrubland Woodland?

yellow green & some  
 shrub leprosum  
 taken 2000



<sup>12</sup>  
A ~~7~~ <sup>2</sup> B ~~22~~ <sup>1</sup> B ~~7~~  
<sup>-3</sup>  
C ~~7~~

B<sup>2</sup> = Gutter  
chicks

Barklyo Rocks = striking  
outcrops - green granite.  
- formal forest reserve

Photos 17-18 Rocky  
moss covered  
outcrops & boulders  
granite - very  
abundant

photos  
18-19 20 Bell + rail  
19-20

Vegetation - very different  
mixed woodland -  
Young wattles, shrubs  
~~low~~ Low, scrubby  
Scrubby bush

Long Wattle 1  
Scarlet Robin 1

21 22  
 Photo ~~20~~ - ~~21~~

On way out from Berkeley  
 Ranch - "Hentley"  
 woodland

Br Shungybark

A<sup>12</sup> B<sup>1-1.5</sup> C<sup>13</sup>  
 A Z B XX C X

B<sup>1-1.5</sup> = *Leptospermum*  
*melaleuca*, *Bombac*  
*leucopogon*, *Pottencea*,  
*Schinus molle*, *Azadirachta*  
 ( *humifusa* )

Crowns have air  
 here

21 22  
 Photo ~~22~~ - ~~23~~ 23-24

Dense  
 Tuber Scrub

Small area

15-40 *Pentstemon*

forming a *Leptospermum*  
 here

12 *Quercus* - *agrostis*  
 in present. - *agrostis*



Extensive woodland  
- varying shrub layer  
- poor soil -

Bill says the extensive  
"shrubby woodland".  
Crossed Eucalypt  
huff Deciduous Hardwood  
to scrubland.

Extensive healthy shrubby  
woodland

Photo ~~23-24~~ 25-26.

~~Banksia~~ ~~Leptospermum~~ ~~Heathland~~, ~~Schinus~~  
Wibemia Hyperborea

Casuarina (healthy one)

Astragalus - Native  
- "Heathland" - cleared??

Probably natural

Height up to 1 metre

3

Several such natural?

clump grass etc.

Extensive ferny  
woodland (bracken)

~~25-26~~Photos ~~26~~ ~~27~~ 27-28

Note the main forest  
 — densely but  
 still woody  
 structure

$$A^{1.5} \quad A_z^{3-5} \quad B_z^2 \quad B_x^1 \quad C_z^{1.3}$$
 $A^{1.5} =$  Br. Strychnos

 $A^{3-5} =$  D. agardhii

 $B^2 =$  Hydnophora

 $B^1 =$  Brechea

 $C^{1.3} =$  Hibiscus plus open

This tends to be open forest  
 — densely but ferny-  
 woody — tree structure

Small W. at the edge of Kangaroo

~~27-28~~Photos ~~28~~ ~~29~~ 29-30

Probably mossy scrub

Heavenly intercalated



Wall The sketch we are illustrating a basic problem  
 These dense enough  
 become concept of  
 "forest" but mainly  
 "woodland" structure  
 Should one choose a  
 base of dominant  
 impression?

Coming into Warner-like  
 country - red green  
 country - not stringy bark  
 Photos ~~30-31~~ 31-32

Red Sun Greeny Teal  
 Savannah

Alaskan Phinney 2  
 Red-rumped Parrot - 2  
 Savanna enigmatica call  
 Note what happens to  
 the Savannah etc

16-15 Neville McDonald  
at Nansen

16:35 Colman all  
unusually grassed  
over Savannah  
for woodland

16.40 Lying out for  
Hamilton house

Savannah at Sun

Kaduna advances 2

check fine examples

park. the Savannah  
woodland on

Colman - Hamilton  
road. But to photograph  
these later

Quint's Warden

~~Hotel~~ Motel Colman  
ca 17.30.

Now at 19.30 after dinner  
Lying down to look off

literature on the pebbles.



At this stage it seems:-

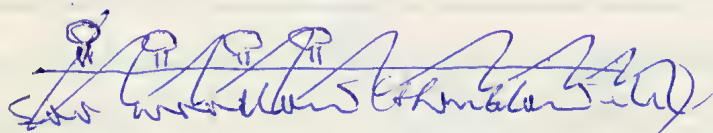
- a Specht's work provides good basis
- b Contrary to past practice (where this was concerned) we should begin with foliage cover rather than structure
- c Normally the appropriate structure will accompany the foliage
- d Sometimes it won't - where case a decision has to be made as to whether to think & speak in terms of forest or woodland
- e Whatever provides the dominant impression might provide the answer to (d) above
- f Specht - concerned in his classification with the life form and height of the tallest

Stratum - but he omits  
 the Savannah etc  
 & in the case the  
 latest stratum is  
 not the most important  
 part but merely a  
 patchwork helping  
 to locate the  
 Savannah characteristic  
 & ~~proving~~ the  
 appropriate establishing  
 the fact perhaps  
 the only type is a  
 "true" Savannah  
 or "Shrub" Savannah  
 etc. It is a necessary  
 part of the Savannah  
 concept but the fact  
 that it is the latest  
 Stratum does not  
 invest it with a special  
 significance. It is the  
result of the presence of  
 grass & the presence of  
~~the~~ an early culture

Trees or shrubs don't  
 = the significant thing  
 i.e. the idea of "savannah"  
 is a clearing  
 between other things;  
 the savannah concept  
 is the thing being  
 doabellied.

An alternative idea  
 would be to have  
 emphases on  
 the scattered trees  
 or shrubs etc. bushes  
 and to speak of these  
 as "sparse trees"  
 or "sparse shrubs"  
 but these could occur  
 over farmland or  
 grassland & it is still  
 not enough to speak  
 of the trees only.



Soil  
RockGrassland (Fernandus hirsutus etc)

Tree (shrub) savanna



Savanna (shrub etc)



Open forest



Closed forest

It seems that Speth  
 objects to the term  
 "Savanna"  
 omits the tree/  
 shrub savanna  
 concept

End of Minolta Film 1.  
Beginning Minolta Film No 2

17

June 4<sup>th</sup> Tues.

0700 up. Coal closed.

0830 Depart. Motel \$10.

To Castleton

Chiefly open cleared

grazing land - occasional

Red Gum Sav. Woodland

Photos <sup>31</sup>32-~~33~~<sup>33</sup>-<sup>34</sup>34 Sav

Grassy Tall Sav & Sav

Woodland

*Kuhnia rosecapilla* 2

Beginning Minolta

Film No 2.

Beautiful Nestled Brown Hawk  
country but no <sup>many</sup> seen

1 *Falco bergoni* (many) on wire

0905 Castleton

Petrol 7 galls

0920 Setting off for Southdown

F2. Photos 1 & 2

Fairy woodland

few miles SW of Castleton  
on Glenelg highway.

Dense hybrid timber

Scattered Bark Chambers





0950 turning left from Elmdale  
highway + towards Wilson  
School

Photos 7 & 8 Red Gum

Open forest? (Tall Woodland)

A<sup>18</sup> B<sup>25</sup> C<sup>3</sup>  
y 22 x x

A = Red Gum

B = Xanthoxylum (paper)

C = grass + herbs grazed + killed

Photos 9 & 10 ditto

Note importance of  
explaining why called  
"Open" when it looks  
dense. Comparison  
is with tropical forest.

Photos 11 & 12

Similar habitat showing  
some ~~more~~ <sup>more</sup> structural  
stage

Pheasant multicolor ♂,  
 Dark grey 1  
 Helioscopus phoeniceus 1  
 Tanager just inside  
 on left

Photos 13 + 14. <sup>Dark</sup>  
 Tanager ~~Dark~~ <sup>Dark</sup> ~~marsh~~  
 Tanager = too long  
 for acacias = like  
 like woodhouse one  
 almost

Calliopephala pombroia 3 ~~Red~~

Photos 15 + 16

"Swooping" hawk & young  
 just inside

Leptosperrum, Tanager,  
 Malacocyanus

(Not ~~not~~ <sup>not</sup> ~~species~~ <sup>species</sup>  
 community. -)

Sheep (like graciline)

white on wing  
 blue

Pine forest

~~Photo~~

Beach house to drift house  
to Slenely River

Photo 17 + 18.

Red Gum Swamp  
woodland along

Slenely River

Photo 19 + 20 ditto

Rush marsh zones  
Megalurus grammurus  
caerulescens

Photo 21 + 22. Rush (Rush)  
Marsh

Emu 2.

Forstailed Cuckoo 1

Shelduck 2

Thalassidroma melanura several

Cygnus alpestris - 1 black.

Wilson's Phalarope 2.



22

Photo 23 + 24

Shrubby Open Woodlands

A<sup>15</sup> 3-6 B<sup>1-2</sup> C<sup>13</sup>  
A Z B Z B X C Y

A<sup>15</sup> = Swampy E. ovalis

A 3-6 " "

B: Leptospermum

C: Ho Scurps  
Scurps

Yellow-winged Honeyeaters  
several

Wh. rumped ~~canon~~ <sup>canon</sup>

Silvereyes (Bell) 3-4

(Hot warm planks)  
(1 Limer)

fibrous mouth with 1

stippled - black wings 1

Gillie's Cat - late  
last century - personally  
collected - 1 cabinet

eggs - date possibly late  
Limer Hills - Bull

to arrange it

Photo 25-26

Open Shrubby woodland  
- Red gum & Swamp gum  
- gully - to show  
what it is like in a  
gully. Complex

Calyptorhynchus furcatus

~~Scrub~~ - flock of ca 40 feeding on  
pine cones

Colinus harrisi a albif.

Chalcophaps indica 1

Meliphaga chrysops 1

1200 Continuing down

Darkwood - small brown 1 pack  
Roadside. Fair

1219 - Darkwood

Lunch \$1.00 - 84 Be

1255 On Departing for Nelson

Maypole link 1

Photos 27-28

Evening Open Forest.

Open forest mid-dense

For Shingybark

A-18 5 B' 1 .3  
Y AZ B' X C Y

A 18 = Shingybark

A 5 = Acacia

B' = Bracken

Photos taken just east of  
Dartmouth

13-20 stopped at cliff  
at Glenelg. herb  
clow on forest -  
mod dense 1. *Strophanthus*  
near Dark Dark

Photos 29-30

Shrubby woodland  
with the shrub component  
pioneer height but  
thinks regrowth of  
trees do not have  
pioneer character  
layers of the northern  
tropical woodland.

A<sup>18</sup> A<sup>6</sup> B<sup>2-3</sup> B<sup>1</sup> C<sup>3-5</sup>  
Z Z Y X X

A<sup>18</sup> *Strophanthus*

A<sup>6</sup> *Acacia* + regrowth

B<sup>2-3</sup> (*Casuarina*)

*Hedyotis*

*Michelia*

*Leptospermum*

B<sup>1</sup>

*Banksia*

C = *gum* <sup>seedlings</sup>  
*tree*



Rufous photos 29-30  
 = to show how Shrubby  
 woodland can be ~~thick~~  
 dense & show varying  
 "layers" that are not distinct  
 layers

Gold whistler heard 1

Grey Fantail 1 (Bully)

1350 Shrub p. Kintla  
 plantation

Photos 31-32

Bulley Ranges Park

Shrubby Woodland with  
 shrubs very pronounced  
 release = *Acacia*  
*Sophora*

Note must explain (check)  
 that 100% cover would  
 mean no light through  
 - even one of these trees  
 under half only gives  
 50% cover - so much light  
 coming through.

26 End 1 Minolta F2  
Begin ~ ~ ~ F3

Photos 33-34

~~Isopyron~~  
Acacia / Isopyron  
Scrub.

Melampus cyaneus ♂,  
Chironomus macrochaeta /

Photo 35 End of film  
Shrubby Woodland

Minolta Film NO 3 begins

Photos 1 & 2 Acacia scrub

As Sophora  
~~Melampus~~ in fragments

Exakta Film 1

Photos 3 & 4

Shrubby Woodland

1540 Nelson

Down to coast

Minolta

Photo 3 & 4

Coastal Scrub

Coastal Beach (Isopyron)

& Acacia sophora (Coastal)

Photos 5 & 6

Coastal scrub with  
background dunes showing  
mixed scrub & dune  
grass - mixed scrub  
= mainly ~~top~~  
composite grass &  
coast wattle

Photos 7 & 8.

"Sourcil" Bearded  
Screw-worm.

Photos 9 & 10

Little closer range

Photos 11 & 12

Again coastal dune  
scrub as 3 & 4 & 5 & 6

Meliphaea iridescens

Ardea nicholl 1



Photos 13 + 14

Juncus after next to  
 Sphagnum producing  
 tiny rush marsh

Photos 15 + 16

X "Swamp" Scrub  
 Lophospermum  
 Linogium  
 (fluscens?)

Melolontha sordida

Carex like ~~sedge~~ sedge

Thick growth -

low lying wet

~~all~~ hollow sedge

root. Scrub structure

in "Swamp" site

Very dense, ~~on~~ Depth 2-3 m.  
 beneath  
 benthic

Note just as "When

does heath become  
 scrub?"

what does scrub  
 on Swamp site  
 become?

Photos 17 & 18

Scrub - same composition  
as 15 & 16 but not  
in quite as wet situation

Photos 19 & 20

Scrub - same composition  
as above but showing  
better development - has  
not been burned & so  
appears by now. The  
one includes Mel.

Laguna site as others  
1535 Travelling towards

Pretton

Stops roadside for roadside  
or roadside belt.

Roadside, phenanthro?

Went into dense pine

Forest - 7-8 years old

For Thornhill - biker's head

Scrub then biker's head

Gold-Whisker -

Grey Thrush head

Cyanocitta head

Goldfinch. See

Alameda marshes

30.

X Hole even - densest  
part taking up should  
at least 30% sky.

To be closed has to  
be very dense -  
100% thickly  
wants exclude all  
direct light. (If you  
met a lumber for best-  
watching you have  
closed ~~with~~ <sup>forest</sup> ~~the~~!!)

16:25 Newbury Park  
Turned ~~back~~ M + Redwood

- ~~unusually~~ -  
pink & red-brown trunks  
on root up to 20

Crimson Rosella 1

2 in the Redwood Nat Park

Photos 21 22

X Low woodlands -  
rather water-logged  
(unconnected)

Swarms of swallows. Natural  
water - structure - many  
than a problem

2nd Hawk light phase /  
~~Return~~ now to  
 Portland from Mt.  
 Park.

17-30 To Lushan Hotel

June 5<sup>th</sup> Wed

0645 Up. - clear, fresh

0830 Set out for Cape Nelson

Semi-mallee on Port Mallee  
 as a term for trees where  
 some show mallee structure.

Plant Specimens

No 1 *Callocephalus brownii*  
 Cushion Bush  
 Cape Nelson Sand Island

No 2 white

No 3 *Leucopogon*  
*prostratus*  
 coastal Band Bush



No 4 dub

No 5. *Alcorno*  
*axillaris*  
 Coast Daisy Bush

*Meliphaga viridis* 1  
*Dasyornis brookbanki* 1  
*Meliphaga nov-hollandiae* 1  
*Chloris chloris* 1, Bell  
*Carduelis carduelis* 1-4.  
*Anthracoceros chrysops* 1 each  
*Colinus pectoratus* 1 each  
*Turdus maculosa* 1-2

Photos 23-24

Dune scrub. Cushion  
 Bush Coast Bush  
 Heath, Coast Daisy Bush

to Cushion  
 Bush  
 Scrub

Photos 25-26

Scrub.

*Eucalyptus diversifolia*  
*Mitrasacme laevifolia*  
 Coast Heath  
 Coast Bush Heath

Note *Eremophila* in middle  
 form bulbo heads  
 with the scrub.

Photo 27 Moonah Scrub  
*Melaleuca lanceolata*

Photo 28 Exposed  
 Moonah Scrub.

Photo 29 *E. diversifolia*  
 showing middle base.

Photo 30 Base of *E. diversifolia*

Photos 31-32 *E. diversifolia*  
 showing slender ~~whipstick~~  
 whipstick character  
 Scrub.

*Alouatta carolinensis* singing

Photos 33-34 Base of *E. diversifolia*  
 to show middle structure

Photos 35-36 - antler diff.  
 example  
 End of antler taken No 3

34 Beginning Minolta film  
NO 4.

Photos 1-2 E. diversifolia  
showing middle structure

Photos 3-4 E. diversifolia  
showing reddish cress-  
like clump.

Photos 5-6 cutto slightly  
longer clump.

10.05 Boulder to Portland  
Bright sandstones color  
+ blue 36c, 22c, + 30c = 88c

Note Dense Cypress has  
thrust not try to read  
then a sample of large  
thing because  
longer thing would not  
exist a if it did  
it would be forest =  
density but not  
forest - structure?

little house spirit  
 much like the  
 - plankton etc

Faded vegetation having  
 some kind of dark  
 when

Photos 7 & 8  
 Juncus →  
 young tussock  
 grassland

Photos 9-10  
 Tussock grassland  
 thicket in which  
 grass with some  
 Juncus.

Photos 11-12  
 Coastal Shrubland  
 (where continuous =  
 scrub)  
 Lycopodium  
 Bux Thymus  
 Hebea Sophora  
 West African Bush



Phytos 13-14

Same area  
showing broken  
vegetation = Shrubland  
becoming a bushy  
scrub (unbroken)  
- Unbroken

Culmaceae 1  
Mylphus nives 2



Bulls  
deep  
creek  
by  
puller -  
fence

ca 14 Red Oyster  
collected on beach  
Hemiptera - Ostracoda

Phytos 15-16

Casuarina  
Woodland  
Casuarina stricta

Etiopis - 1

Thales 17-18

Casuarina stricta  
woodland - possibly  
plantation.

Alnus arvensis - damp  
Coll. harmonica 1

Aemulga chrysanthra 9-12

many small shells  
Pteridium aquilinum several

Plant/Sp. No 6:

Casuarina stricta

Roadside

Erubia corollata ?

1200 - 2m Mt. Kachin  
Nat Park

Note Box Stringybark

can be 1/1 mallee

like scrubland but says  
names for woodland ~~forest~~  
forest for 1/1 mallee, many

be result of firing  
 suggest we must  
 draw attention to the  
 different possible

Photo 19-20

Br Shengbark N/S  
 showing water form  
 but might even  
 be there sep. seedlings  
 - can't really say

Photo 21-22.

Shubby Woodland  
 Sep. shots

$A^b$   $B^{1.5-2.5}$   $1$   $.3$   
 $A_z$   $B_z$   $B_y$   $C_y$

$A^b$  = Br Shengbark

$B^{1.5}$  = ~~low vegetation~~  
~~low vegetation~~

$B^1$  = ~~low vegetation~~  
~~low vegetation~~

$C$  = ~~low vegetation~~  
~~low vegetation~~

Exaltia Fl. photos 546

Shrubby ~~climber~~  
 Same shot diff angle  
 multiple branches in view

12-30 stopped for lunch

Photos 23-24 (Mammals)

Low Shrubby Woodland  
 (Xanthoxylum)  
 Br. Swampy bank

13. 10 mangrove

Photos 25 - 26 -

Swampy Ground ~~with~~ <sup>with</sup> ~~rich~~ <sup>rich</sup> ~~wood~~  
 Disturbed multiple forest

Photo 27-28

Little - diff. camp.

13-20 Getting out for Kentonville  
 Hunt.



Photos 29-30

Scrub Bark

Peppermint

Woodlands - what  
would have been  
called Tall Woodlands

Southern Yellow Rubber ?  
(Bul)

13.45 (82.7) morning  
mouth - Mouth Swamp  
road to Heathland  
Immediately after  
Forest Forest

Photos 31-32

X Open forest

X N/B

A<sup>21-24</sup> A<sup>10</sup> B<sup>1-1.5</sup> C<sup>.3</sup>  
⊗ A<sub>z</sub> B<sub>y</sub> C<sub>y</sub>

A21-24 = Scrub Bark Peppermint  
Strongly

A<sup>10</sup> signpost

B : Bonbarai  
Heath  
Xanthoxanth

C : Heath, grasses

Ex note  
p41

Wall. The forest is  
 more open than 30%  
 ∴ not forest - but  
 the point is it has been  
 affected by logging -  
 it has made it open.

The point is the trees  
 would not have assumed  
 forest form if they all  
 height & shape if they  
 had not been growing  
 close together. So  
 what is here is really  
 the remains of forest  
 - now presenting density  
 or rather lack of it that  
 belongs to woodland  
 formation - but I  
 still has the feeling  
 characteristics of  
 forest & should not be  
 called woodland - but  
 in calling it forest

~~giving~~ one side has  
 to give ~~it~~<sup>it's</sup> form  
 a density based  
 on stumps as  
 well as trees or  
 on trees only as they are  
 now which would  
 give a woodland density  
 not a forest one.  
 Logged with forest  
 explain the situation

Photo 33-34

Open Forest - ~~reproduction~~  
 - showing the density  
 that ~~wood~~ occurs  
 in the earlier stages  
 Regeneration

Promissory note. Hall. 2-

Kentucky Heartland

1435 - Have owned - have  
 been asleep - Bill's  
 owned here under  
 his own title.

End of Minolta Film No 43  
Begin Film No 5 7.

Photos 35-36-37

Heath - Cassinia  
Habenaria leptophylla  
mulinacea Bonanza  
Swampbush, Hypoxis  
Minolta Film No 5 Sanyo

Photos 1-2. 1.5 to 1.5  
in the

~~CHM~~ - the Heath.

Very dense heath

Plant Specimens

No 7, 8, 9 Sedgwick

plant growing in swampy  
patch by roadside

Kentbourne Heathland

15-15 Sitting out now for  
Haywood

15-30 Haywood

B.F.C.S 2

Concept of Time Lapse

- after max. distance  
exposed. explain the  
time to print when



Single bird present  
difficulties

Falco bengalensis 2 - 1st  
under dark upper -  
16.00 P. 11.00

Rept. 11 1/2 (12) gulls  
1700 Rept. 11.00  
dinner, 9

~~discussion~~  
on work

June 6<sup>th</sup> Thursday

0700 Up - - cool  
clouded

0830 Departing for Pt Farley

Sterna cyanopectus 2-3, 1, 1,  
Falco bengalensis 1 - 1st upper  
lower

Egmontia 1st 2+

Cornus mollis. B. chene  
this sp. has been the  
one found consistently  
seen ~~that~~ on all  
parts covered on the

Nov 9. Hypotrachea, not at prop. ident 45  
Pseudotsugam habitem.

Keep up to date. common.

Falco berigora 1

Archus crested 1

Sympterna hypotrachea 5,  
3, 3, 1, 2, 3, 1, 4

Slavus vulgaris common  
throughout open country.

Corvus mell. 1, 1, 1, 1

Holostichus sphenoceros 1

Kabala roseopallens 4-5

0900 Yambuku

Sympterna hypotrachea 1, 1, 1, 3, 3

Kabala roseopallens 6

S. hypotrachea 1, 4, 1, 2, 4, 2, 1, 1

Grallina cyanolencea 1, 2, 2, 2

Cygnus atricapillus flock.

Corvus mell. 2

Falco berigora abrup!

Abn front as well 1

Note Sympterna hypotrachea

Taken at Pt Fwy 0925

50 at least noted to the

parents not looked for all

the way. Do they

congregate on road?

No birds seen the morning  
0940 Tower Hill Reserve

Large *temperata* -

toal bed slushy

Turning north to Koroi

0950 ~~Turning~~ back to

Watermark -

Country north of Koroi

high grassy land -

wood break clumps

little native shrubs

as seen looking north

from Tower Hill side

of Koroi

Also *enchedes*?

1000 Northward

1010 *enchedes*

Photos 3-4

Open grassland

grazing land

with *compens* *enchedes*

1020 *enchedes*

Now Open Forest - Shrubby  
 Woodlands - Swamp  
 Gum & Eucalypt

Photo 5-6 Open Forest  
 Soil with heavy  
 Shrub layer  
 Mammals, Shrub  
 = *Acacia* + *Leptospermum*  
 Shrubs - 10ft. Trees - 50ft

Photo 778 ~~Open Forest~~ ~~Open Forest~~

Young - Mammals:

<sup>12-18</sup> A <sup>3</sup> B <sup>5-1</sup> C

A = *Macaranga* young

B = *Acacia*, *Boerhaavia* *abundant*

C = *Eucalypt*, *Brodiaea*

What will distinguish  
 Wet Scler. from Dry Scler.  
 both have dense -  
 woods have large L  
 floristics  
 exist wet = *Persea* etc  
 but not how

Anomalous  
hard open



48 Photos 9-10

Tail

~~Leaf~~ Open forest

(almost wet creek)

~~B~~ Mesquite & manna  
Sun

(Shrub layer & photos  
7 & 8)

Photos 11-12

Tail Open Forest

clouds  
tail  
open  
forest

Manna Sun

A<sup>25</sup> A<sup>10</sup> B<sup>1-3</sup> C<sup>15</sup>  
y z y y

A<sup>25</sup> = Manna

A<sup>10</sup> = Blackwood

B<sup>1-3</sup> = Quercus  
Banks

C = grasses & herbs

---

Exakta Photos 7 & 8 Same  
shot as photos 11-12 above

Exakta Photos 9-10

Center close by

Exakta Photos 11-12

Sunny - into Tail open forest

---

# Minnolta Cont

Photos 13-14 Same  
 gully as Exakta 11-12.  
 Tall open Forest  
 with lower layer -  
 (~~Reynolds~~), Blackwort  
 Leptospermum

11:05 Turned north towards  
 Terang

Photos 15-16

Planted Tree Larrea mah  
 Pini

11:20 Terang

Leaving off to northlake

Heath is mostly scrub -  
 would come in subdominant  
 to scrub.

11:30 North

Some ~~plants~~ <sup>walls/pines</sup> appearing  
 for forest line.  
 Very fine example

*F. senecioides* 1

*F. benigola* 1

*Rhus glabra* 1

March 12 11:40

North Sugar Gum plantation  
— commonest characteristic of  
closed forest

Photos 17-18

Sugar Gum wind  
broken scrub

Open Forest patches

← But what to call it

It is a sample of more  
planted vegetation which  
has the structure of open  
forest. — if it is regarded as  
a sample then it is part of  
a theoretical continuum  
— the whole would be  
"forest"

11:50 Haxham

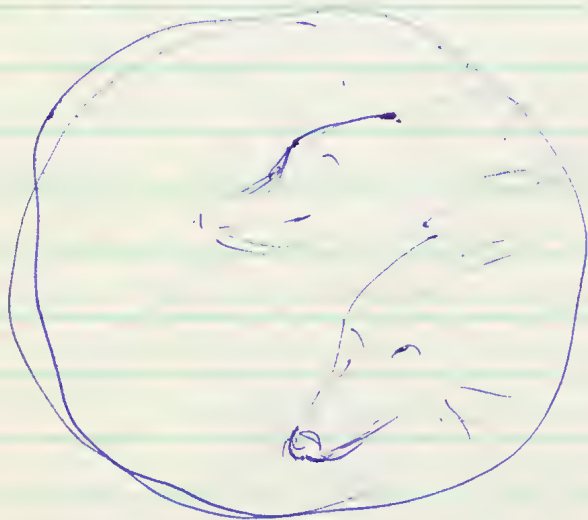




5

B FCS 1 Carter  
 Rockwell gallery plus  
 Malpington principal of  
 National Academy

Round print of Nares  
 Nares.



Dear Friends  
 I am very glad to  
 know from the  
 original Rockwell  
 by the late J. J.  
 Bateman in the

Possession of the  
Publishing.

[Presumably, 15th cent  
Landscape with  
slightly sentimental  
moderation but very  
appealing,  
Rome edge printed

= London published

Jan'y 1850 by Lloyd,  
Brothers & Co

22 Ludgate Hill

11.30 Depart with for  
Elmhurst Park

Photos <sup>19-20</sup> ~~18-19~~ Part from  
Tree Savannah ~~Woodland~~

Cart from Monmouth

NO. 5

54 Began Menolla Nov

Menolla Film Nov

Photos 1 & 2

~~1/2~~ Eucalyptus

(Grazing here)

but with trees - ca

may eat for  
Tara Sammons

Photos 3 & 4

Open woods -

Cornier, bamboo

Casuarina shrub

a few <sup>Billy</sup> <sup>Wash</sup>

but note clear

litter & dead trees

This dead stuff

important for

problem

Photos 5 & 6 data

Note does litter

more lying

clear wood

1/2 total here for study

1700 Glenkemp  
 Beautiful Sav. Wooded  
 Red Sun

Falco burgula very  
 pale here,  
 Beautiful Red Sun Sav  
 wooded

1705 Dunbart

1730 Hamilton  
 Botanical Flg, Wooded -

20:45 Summary of  
 Progress & Ideas

This field research  
 carried out in this p.  
 region to this point  
 has, we feel, already  
 proved to be satisfying  
 and successful.

The progress, we  
 think, can be summarized



as follows :-

1. We are optimistic that the aim of the project is feasible, worthwhile and capable of being achieved.
2. The system put forward by Specht expressing density as a basic criterion provides it seems the best and most workable method and is one we find very valuable and acceptable as a fundamental rule.
3. The chief points calling for further attention are :-
  - (a) the need for expression of "savannah" and especially for representation of "true savannah"

- (b) the idea of <sup>the</sup> vegetation type as a sample of <sup>the</sup> minimum size required to contain all ~~for~~ elements of the vegetation type in question.
- (c) the idea of the visual limits to the view of the veg. type sample and the sample as a sample of a continuum
- (d) the separate idea of the particular veg. type as a distinct unit within the larger framework of the countryside in general.
- (e) the various separate and incidental aspects mentioned in various parts of these notes.

58

June 2<sup>nd</sup> Friday

0715 AM. - cool cloudy  
afternoon

0830 Depart for Sengmany

- pickup first 10 Gall

0845 Towards Deukhet

Spurred Flies 2

Photos 7 & 8 Gressland

Alauda arvensis

Sengmy

F. berigra 12th Nov

Photos 9 & 10 Red Gum  
Low Woodland

Photos 11 ~~12~~ Red Gum  
Low Woodland

Photo 12 Sp shot Red Gum  
Low Woodland

Kerkela penicillata  
fresh

Photos 13 & 14 Red Sun  
Leav Woodland

Photos 15 & 16 Red Sun Leav  
Woodland

{ Exakta Photos 13 & 14 } Red Sun  
{ Exakta Photos 15 & 16 } Leav Woodland

Dumbolt 0930 1/2 mile

further on

0945 Depart Dumbolt to north  
on road side of Pleasure Range  
Mt Shugan at foot range  
then Mt Akamp

Calluna vulgaris latifolia 1.

Gromphosus

Photos 17 & 18

Low Healthy Woodland

Br Stungunbank

A<sup>6</sup> B<sup>2</sup> C<sup>1</sup>  
A<sub>2</sub> B<sub>2</sub> C<sub>X</sub>

Ab = long bark

B<sup>2</sup> = young arch  
a dark brown ch

C<sup>1</sup> = dark  
"Heath" sp. xanthocephala  
birds



60

Photos 19-20  
Further shots  
low healthy Woodland

Photos 21-22.  
~~Open~~ Woodland  
Not expanded. appears  
like forest but  
from inside looking  
up the canopy cover  
is clearly only up to  
30% - close but  
perhaps but ~~not~~  
generally not more  
than that in woodland

<sup>15</sup>  
A<sub>2</sub> C<sub>22</sub> Lr<sub>2</sub> x

A<sup>15</sup> = ~~thunder~~ Sun

C = grass + herbs

Lr = lily - leaves + twigs

Photos 23-24

Foreground & the vegetation  
 to show clearly of  
 full holes within  
 even though canopy  
 over.

Photos 25-26

Looking up ← show  
 openness.

Photos 27-28

(~~Open~~<sup>2</sup>) healthy woodlands

A<sup>10</sup> 2 B<sub>22</sub> ~~1.5-1.5~~ 1.5 1.5 B<sub>x</sub> C<sup>.5</sup><sub>x</sub>

A<sup>10</sup> Bracken & mosses

B<sub>x</sub> Int ~ ~ plus Lycopodium  
 Calluna etc

b. 1.5-1.5 Heath Xanthoxylum  
 small acacias  
 & other woody shrubs

C<sup>.5</sup> = Hebe, grasses

Photos 29-30

Lev. encalypt - woodland  
form (structure)

~~the~~ clump. Use  
either ~~not~~ for woodlands?

Photos 31-32.

Shrubby woodland

Low Sun +

Leptospermum dense  
shrubby.

Growing dense  
shrubs layer.

10.45 Crossing Wannon Rd

Photos 33-34

low shrubby woodland  
Reppent

A<sup>1</sup> B<sup>2</sup> B<sup>1</sup> C<sup>1.5</sup>  
Z Y X X

A<sup>1</sup> - Reppent

B<sup>2</sup> Leptospermum

B<sup>1</sup> Xanthorrhoea  
Healthy herb  
Bush-like herbs

Ends Film NO 6 Minolta  
Begin Minolta NO 7.

63

Photos 35, Two shots  
Photos 36 & Lagoon

Open Forest.

Very on wet sclerophyll  
~~but still would call~~  
~~that~~.

Manna Gum  
Blackwood lower large  
Jimmy's Creek Picnic  
Ground.

<sup>Begin</sup>  
Minolta Film NO 7

Photos 1 & 2

Looking up in photos  
35 & 36. Note not

dense no more than  
the earlier dry letter  
woodland one.

So what do we call it? S.  
Structure definitely  
includes L forest.

All probably emphasizes  
open that canopy density



seems may take  
 some slowly part  
 but the Spinetall  
 or form must be  
 taken into account  
 where needed to  
 reach a decision

Photos 3 + 4  
 Low Shrubby Woodland  
 Peppermint 4-5 inches

11.40 Passing Lake Bellpuet  
 on right

12.00 Halls Gap

13.00 ~~many~~ <sup>very</sup> ~~rough~~  
 lunch - towards

Mount Cook

Photos 5 + 6

Elephant's head

Rock face vegetation

and Halls Gap



66

→ humming where place  
bordered by eucalypt  
young trees & forest  
from  
McKenzie Falls - spotted  
B. 50  
Early Kangaroo -  
mob.

Shepherdia  
Several Note at Hall's  
Lay - 4-5 birds  
with white on wing  
blend head and  
upper back  
but distinctly diff. in  
tone & shape from  
N.E. birds

Photos 13.14

Woad

Yellow Box yellow  
long leaves  
Box. Litter &  
growing in grass.

Eastman 7.

85

Swampy woods, find  
low shrubs with ~~aspen~~  
of Litter Y-Z.

Photos 15-16

Red Gum Woodland

Photos 17-18 Woodland

Be Shaggybark with  
heavy litter layer.

Trees 30 feet - probably  
no ~~some~~ layer -  
more with (grass and)

16-18 and ~~photos~~

Photos 19-20

Red Gum Tree Savanna

End ~~photos~~ Film 2

Beginning ~~photos~~ Film 8  
Photos 1-5

Swampy Woodland  
(Shrub ~~Forest~~ Woodland)  
where ~~open~~ fields, bushes  
are present become Reddy  
Woodland, Red Woodland or ~~Swampy~~ Woodland



Perhaps Swamp Woodhens  
when only water  
Rough Swamp Woodhens  
when birds present

1500 Horseshoe  
Casuarina ~~grove~~  
near Kemperia -  
Bulldozer take -

15-30 Deimbola  
~~Depart~~ for Dumbala  
Chaplin

Wanna & Hensen

June 8<sup>th</sup> Sat -

0830 1/2


0945 Depart  
Rebut 7 gals.


1000 Depart Deimbola  
for Milbourn

Arrival 11:40 Cold  
windy.

~~Baccharis~~

Ballroom 1400 Lunch  
Valley Lee: 16:30 <sup>Baccharis</sup> <sup>Ritual</sup>

Note. Rock face or cliff  
veg. I have always  
held that the angle of  
the plane on which  
they grow (eg. )

 does not alter the  
veg. type category. - but  
this has been based on  
structure or fundamental  
intensity - not that  
conceivable is second  
basic one the concept  
changes because  
conceivable obviously  
is not the same here.  
where angle is very steep, and  
would be changed, what  
over soil ?? - think on  
this

Trip to Hamilton/Haven  
for address on  
John Gault &  
29<sup>th</sup> Cent Lithograph<sup>5</sup>

May 12<sup>th</sup> 1982.

11.30 Arrived  
Shawville - stayed  
Voyager with more  
offer ~~be~~  
with ~~be~~ home.

13.40 Group to the Ballard  
for excellent crabs  
lunch

17.30 Lakeside Fing  
Hotel Hamilton  
The day has been  
overcast - with  
increasing low  
foggy clouds &  
some shady  
showers -

May 13 Thurs

Osgood up.

10:15 Depart Kwik  
Cool cloudy

arrived Kelmuc

ca 1405.

discussed  
with McDonald  
after tea -

28/20 - let out

with John &  
Geraldine McDonald  
for Hamilton

2000 plus gave  
address John  
Spink & the

19th and  
Lithograph "

handwritten  
~~about~~ 30 plus

72

Successful  
New boat & Kolumer

May 14 & Frid

Day spent at  
Navarro To Innapul  
↳ See Bishop  
amongst paddock  
during morning  
Thence to School  
New boat &  
Kolumer for  
lunch  
Thence to route  
paddock -  
Timber - Road  
seen open &  
faced road  
Still very pleasant



- beautiful habitat.

One or two rabbit  
seen - ~~some~~  
songs ~~some~~ -  
cuckoo, still  
maria.

many mappers  
present

2600 + Deputy  
Kulmuis  
arrived Hamilton  
ca 1200

TO Lakeside  
Hotel.

May 11th Sat  
Fine clear

Deputy 1000 - 11.00

13-30 lunch for Der. T. & H.

74

1700 Ann Vakeyly

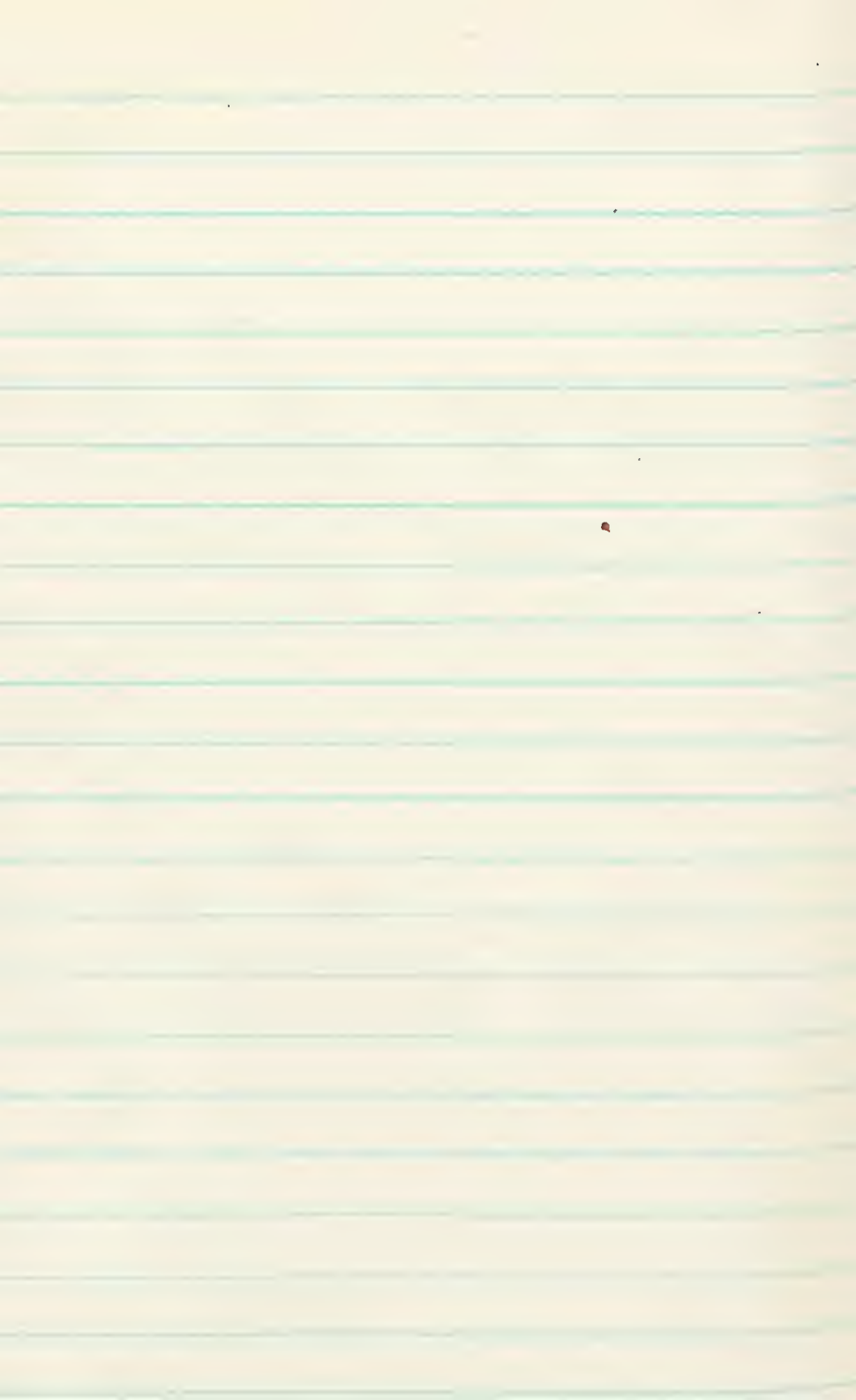
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- A Shady place  
- the ~~company~~ <sup>company</sup> over  
my G. G. L. S. by  
Soul Con. - Ark.  
1967.

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(by same Dept - as above \$10)

A.

# Index

- Alauda arvensis p 2, 33, 37, 58,
- Anas superciliosa p 4
- Ardea nova-hollandiae p 4, 27,
- Egretta leucorhynchos p 30
- Anthracoceros chrysotis 32
- Acridothera tristis ~~chrysotis~~ ~~chrysotis~~ ~~chrysotis~~ 37, 51,
- Anthus anathalis 45
- Alouatta 46
- Anthracoceros cornutus 51,
- Art 52
- Amur 52



A  
cont)

B.

- Burley's Reels 7

- Bibliography in page before  
beginning of index

- Bulley Ranges 25

- Boggs Sandy 51-3.

- Corvus mellori (?) 2, <sup>44-</sup><sub>45</sub>
- Coscoron & San Tadeo
- Colinus 12,
- Cisticola 312
- Colinus humboldtii 18, 23,  
32, 36, 37, 59,
- Colinus leucurus 20
- Columba pyrrhopterus  
pyrrhopterus 21,
- Ceryle alcyon 21, 45,
- Calyptorhynchus funereus 23
- Chondestes leucophaea 23, 26,
- Condalia condalia 32
- Chloris chloris 32

C  
(Cont.)

Coracina nor-hill 73, 52

Cabernet - 51,

(cont.)



C.  
(cont.)

- Demboda P1
- Daselo gijis 4, 20
- Dromonius norm-Lubandul P8,  
21, 42,
- Därkin ppv 23,
- Dasysomus broadbente 32,
- Deekhondo peur 52
- Deenkals 55

E

- Leaves notations p. 3

- denotation 8

Exakte Lerp 26, p 39, p 48, p 59,

- Exakte ausgabe 10

- Falco beringia 2, absent 17, 17,  
 18, 31, ~~hanging~~ 35, 44, 44, 45, 45,  
 50, 51, 55, 58,  
 - Falco cinereus 2, absent 17,  
 46, 46, 50,  
 1, <sup>minolta</sup>  
 - Films NO1 p3 - 17; Minolta NO2 p17 - 26;  
 Minolta NO3 p28 - 33; Minolta NO4 p34 -  
 43; Minolta NO5 p43 - 53;  
 NO6 Minolta NO6 p54 - 63;  
 Minolta NO7 p63 - 67; NO8 p67 -

G.

Cyminopterus hypoleucus 2, 6,  
44, 45, Summary 45 foot;

- Grallina cyanoleuca 18, 23,  
37, 44, ~~44~~, 45, 51,

- Fulmaria biguttata 22-3,

- Glaucopis 55-



- Hibosium opacum p 6, 11, 20

45,

- Hutchins 18

- Hirundo neoxena 21, 52

- Homotopus ostralegus 36

- Hoxham 50,

- Hovellon 55

- Halls Sep. 64

- Horsesham 66

I



K.

- Kakalvi pusicapilla 3, 17, 45
- " galina 5, 52,
- " tennerostres 5, 6, 58,
- Kangaroo 10<sup>3</sup>, 66,
- Korail 46

- Kaua no hokandene 3

- Kohikayx no hokandene 4, 5, 1,  
58,



M.

- Melospiza leucophrys 19, 7
- Myzomela melanophala 22
- Malurus cyaneus 18, 26,
- Megalurus gramineus 21
- Melipernis nana hollandiae 52,  
32, 51,
- Melithreptus lunatus 22.
- Meliphaga chrysops 23
- Meliphaga vitascens 27, 32  
36,
- Melithreptus brevirostris 39
- Mutlaka 50

12  
(cont)

N.

- Nalimuk p 34
- Nansen 11, 12
- Nelson 26,
- Neringul 4d
- Nomial 49
- Nansen Nansen 51-3

~ Acypha Cyphus 5

P.

- Petrol p 1.

- Psephodes hemalonotus p 2, 11

- Possum 1.

- Porphyrio melanotos p 6

- Putipica multiceps 4, 20  
22, 29.

- Pachycephala pectoralis 25

- Pene Planticola 29

- Platycercus ~~et~~ elegans 30  
32, 51,

- Plant Specimens 1-5 p 31-2,  
6-7 p 37; 7-8-9 p 43;

- Pl. Favus 45



(Cont)

P. (cont)



R.

- References see Bibliography
- Rhipidura leucophrys 28
- Rhipidura ~~for~~ flabellifrons.  
25
- Rhipidura leucophrys 1, 51,

- 5
- Lesura inquieta 41
  - Strepia 20, 22, 37,
  - trials 37.
  - Strepia virgata 45
  - Stone Walls/fences 49
  - Summary 55-57
  - Strepia gracilis 66



S (cont)

a. Tachina tachinoides p5, 12,  
21,

- ~~Tach~~

- Threshum involuta 21,

- Tachina involuta 52-51

- Tachina 46,

- Tachina 49,

4

- Vegetation Types - notes on diary, p 2, 6  
11, Summary 13-16, 25, 28, 29 (names)
- For future ref. p 4,

p 30, make swampy 30, 31, 34  
 37-8 (Shaggyback "Gnake"), 412, 43,  
 wet Seltzer powder 47, Hedge 49,  
 Sugar Sw Plankton - Forest 50,  
 Conifer 51, Pine wood 54,  
 Summary 55-57, from +  
 clearly both important - p 63,  
 Sugar wood 67.

nd

- W alkley 10<sup>2</sup>.

Yamukuh 45

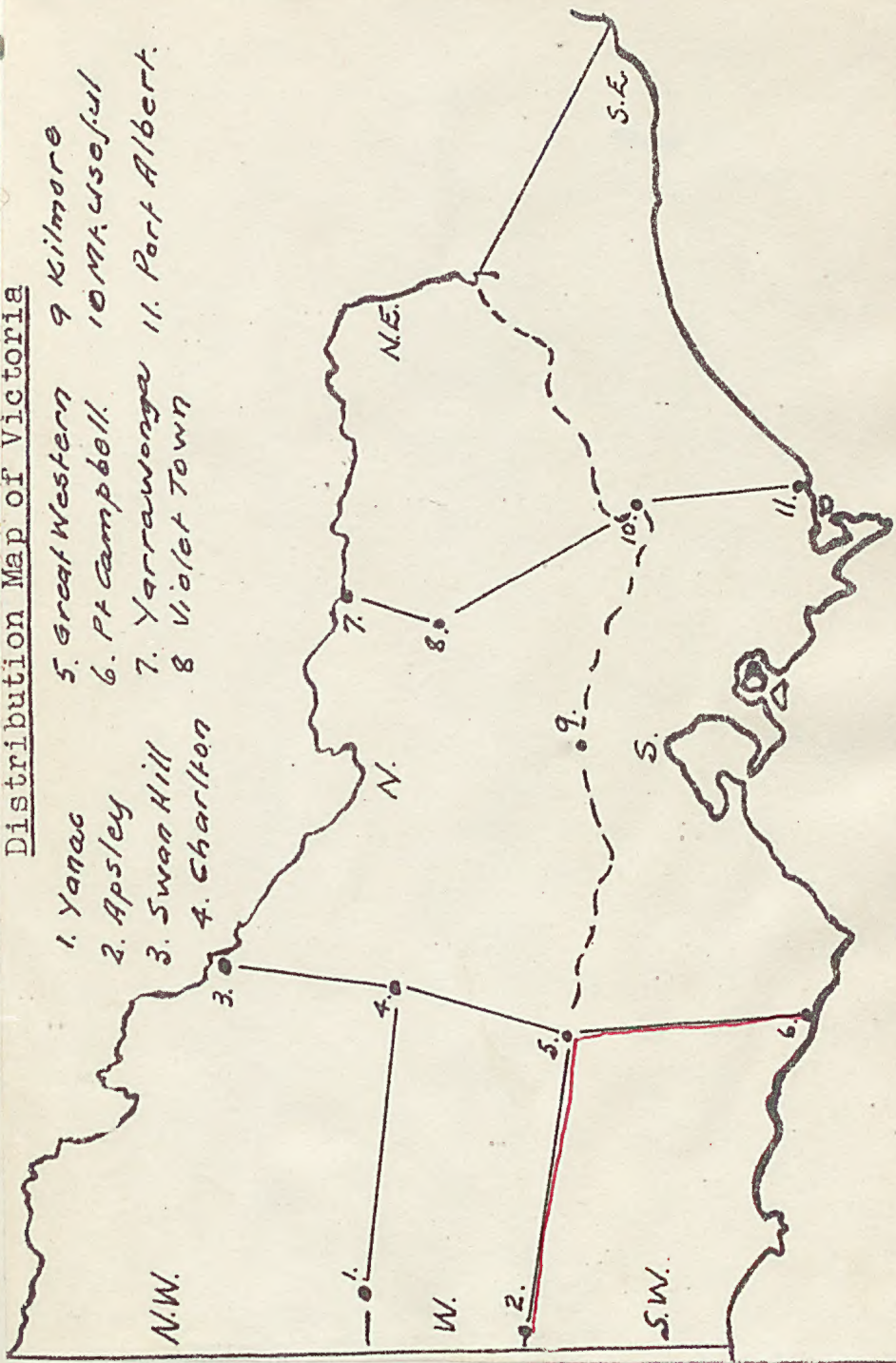


w/ 2,

- Zosterops 22

# Distribution Map of Victoria

- |              |                  |                 |
|--------------|------------------|-----------------|
| 1. Yanac     | 5. Great Western | 9. Kilmore      |
| 2. Apsley    | 6. Pt Campbell   | 10. M.A. useful |
| 3. Swan Hill | 7. Yarrowong     | 11. Port Albert |
| 4. Charlton  | 8. Violet Town   |                 |



June 3 1880.

## Projective Foliage Cover of Tallest Stratum\*

Life Form and Height of Tallest Stratum*	$\times$ Dense $\times \times$ $\times \approx (70-100\%) = \times \times \times$	Mid Dense (30-70%) = $\times$	Sparse (10-30%) = $\times$	Very Sparse† $22. = (< 10\%)$
Trees† > 30 m Trees† 10-30 m Trees† 5-10 m	Tall closed-forest* Closed-forest* Low closed-forest*	Tall open-forest Open-forest Low open-forest	Tall woodland§ Woodland Low woodland	Tall open-woodland§ Open-woodland§ Low open-woodland
Shrubs† 2-8 m Shrubs† 0-2 m	Closed-scrub Closed-heath	Open-scrub Open-heath	Tall shrubland Low shrubland	Tall open-shrubland Low open-shrubland§
Hummock grasses 0-2 m	—	—	Hummock grassland	Open hummock grass-land§
Herbs (incl. moss, ferns, hemi-cryptophytes, geophytes, therophytes, hydrophytes, helophytes)	Closed-herbland¶ Closed-tussock grassland Closed-grassland Closed-herbfield Closed-sedgeland Closed-fernland Closed-mossland	Herbland¶ Tussock grassland Grassland Herbfield Sedgeland Fernland Mossland	Open-herbland¶ Open-tussock grassland Open-grassland Open-herbfield Open-sedgeland Open-fernland§ Open-mossland§	— — — — — — —

\* Isolated trees (emergents) may project from the canopy of some communities (Richards, Tansley, and Watt, *Imp. For. Inst. Pap.* No. 19, 1939, 6). In some closed-forests, emergent *Araucaria*, *Acacia*, or *Eucalyptus* species may be so frequent that the resultant structural form may be classified better as an open forest.

† Some ecologists prefer to ignore scattered trees and shrubs, equivalent to emergents in a predominantly grassland, heath, or shrubland formation.

‡ A tree is defined as a woody plant more than 5 m tall, usually with a single stem. A shrub is a woody plant less than 8 m tall, frequently with many stems arising at or near the base (slightly modified from Beadle and Costin, *Proc. Linn. Soc. N.S.W.* 77, 1952, 61).

§ These formations are rare in Australia.

¶ Appropriate names for the community will depend on the nature of the dominant herb.



Form	Density of Tailed very Dense (v.d.) ( $<$ dia. canopy)	Dense (d.) ( $<$ twice dia. canopy)	Spration Mid-dense (m.d.) ( $>$ twice dia. canopy)	Open (o.)
$TS_1S_2$	Rain forest T { Multistoreyed—tropical and temperate rain forest Unistoreyed—depauperate rain forest	Sclerophyll forest S { Sclerophyllous—dry sclerophyll forest Partly mesomorphic—wet sclerophyll forest	—	— [Forms & Sub forms of legulation - woods]
$T/S_1S_2$	—	Sclerophyll shrub woodland T { Single-stemmed—tall and low sclerophyll shrub woodland Multistemmed—mallee	—	Tree heath
$S_2$	—	Heath	—	—
$TG$	—	Grassy forest	Woodland T { Mid-dense—tall and low woodland More open—savannah woodland	Tree savannah
$TS_1S_2G$	—	Layered forest	Layered woodland	—
$T/S_1S_2G$	—	Low layered forest	Low layered woodland	Shrub savannah
$S_2G$	—	—	Shrub steppe	—
G (grasses) (forbs)	—	Continuous grassland Herbfield	Tussock grassland	Hummock grassland

\* T, trees;  $S_1$ , tall shrubs;  $S_2$ , low shrubs; G, herbs. For further details and explanations see p. 68.

